

REMARKS

Examiner Mitchell is thanked for the thorough examination and search of the subject Patent Application. Claim 21 has been amended and Claim 27 has been canceled.

All Claims are believed to be in condition for Allowance, and that is so requested.

Reconsideration of the rejection under 35 U.S.C. 102 of Claims 21-24 and 26-29 as being anticipated by Sakurai et al is requested in view of amended Claim 21 and in accordance with the following remarks.

Claim 21 had been amended to claim an epoxy layer 410 on the surface of the substrate, as taught on page 10 and as shown in Figs. 4C-4E, for example. Sakurai et al do not teach an epoxy layer.

Reconsideration of the rejection under 35 U.S.C. 102 of Claims 21-24 and 26-29 as being anticipated by Sakurai et al is requested in view of amended Claim 21 and in accordance with the remarks above.

Jin also does not show a vertical conductor as claimed in Applicant's amended claim 21. In Fig. 12, Jin shows conductor 28/30/32 having a tapered bottom portion. Claim 21 has been amended to make it clear that insulation layer 410 covers a lower portion of the side surfaces of conductor 210, as shown in Fig. 4E. The reflowable material covers the upper

portion of the side surfaces of the conductor 210 not covered by the insulation layer 410. In Jin, the reflowable material 36 covers all of the side surfaces of the conductor 28/30/32 (as shown in Fig. 12). Jin does not teach the insulation layer covering a portion of the side surfaces of the conductor and the reflowable material covering another portion of the side surfaces of the conductor not covered by the insulation layer.

Reconsideration of the rejection under 35 U.S.C. 103(a) of Claim 25 as being unpatentable over Sakurai et al in combination with Jin is requested in view of Amended Claim 21 and in accordance with the following remarks.

As discussed above, Sakurai et al does not teach or suggest an epoxy layer covering a portion of the side surfaces of the conductor. While it is agreed that Jin teaches nickel and gold layers 30 and 32 under reflowable material 36 (Fig. 12), the combination of Jin with Sakurai et al would not result in Applicant's invention since neither Sakurai et al nor Jin teach or suggest an epoxy layer covering a portion of the side surfaces of the conductor.

The passivation film 14 of Jin and of Sakurai et al is not the same as the epoxy layer 410 of Applicant's invention. Applicant's layer 410 is coated onto the substrate surface after formation of the copper pillars, as taught on page 10 of the Specification and as shown in the progression of drawing figures 4B-4D. The passivation film 14 of both Jin and Sakurai is formed overlying the pad. An opening is etched into the passivation layer to expose the pad. The conductor is then formed within the opening in the passivation layer 14. (see Jin paragraphs 0042-0050 and Sakurai et al paragraphs 0095-0101 and 0161). The combination of Sakurai et al

with Jin does not teach or suggest the epoxy layer covering a portion of the side surfaces of the conductor and the reflowable material covering another portion of the side surfaces of the conductor not covered by the insulation layer.

Reconsideration of the rejection under 35 U.S.C. 103(a) of Claim 25 as being unpatentable over Sakurai et al in combination with Jin is requested in view of Amended Claim 21 and in accordance with the remarks above.

Allowance of all Claims is requested.

It is requested that should Examiner Mitchell not find that the Claims are now Allowable that the Examiner call the undersigned at 845-452-5863 to overcome any problems preventing allowance.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'SBA', with a long horizontal flourish extending to the right.

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